



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[EPA-HQ-OAR-2021-0200; FRL-8515-02-OAR]

RIN 2060-AV23

New Source Performance Standards Review for Industrial Surface Coating of Plastic Parts for Business Machines

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing amendments to the Standards of Performance for Industrial Surface Coating of Plastic Parts for Business Machines as the preliminary results of the review of the new source performance standards required by the Clean Air Act. Specific to affected facilities that commence construction, modification, or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the EPA is, in new subpart TTTa, proposing volatile organic compound (VOC) emission limitations for prime, color, texture, and touch-up coating operations. We are also proposing in subparts TTTa and TTT to include a requirement for electronic submission of periodic compliance reports.

DATES: Comments must be received on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Public hearing: If anyone contacts us requesting a public hearing on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we

will hold a virtual public hearing. See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

ADDRESSES: You may send comments, identified by Docket ID No. EPA-HQ-OAR-2021-0200, by any of the following methods:

- Federal eRulemaking Portal: <https://www.regulations.gov/> (our preferred method).
Follow the online instructions for submitting comments.
- Email: a-and-r-docket@epa.gov. Include Docket ID No. EPA-HQ-OAR-2021-0200 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2021-0200.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA-HQ-OAR-2021-0200, Mail Code 28221T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.
- Hand/Courier Delivery: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m. – 4:30 p.m., Monday – Friday (except federal holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Ms. Lisa Sutton, Minerals and Manufacturing Group, Sector Policies and Programs Division (D243-04), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-3450; fax number: (919) 541-4991; and email address: sutton.lisa@epa.gov.

SUPPLEMENTARY INFORMATION:

Participation in virtual public hearing. Please note that because of current Centers for Disease Control and Prevention (CDC) recommendations, as well as state and local orders for social distancing to limit the spread of COVID-19, the EPA cannot hold in-person public meetings at this time.

To request a virtual public hearing, contact the public hearing team at (888) 372-8699 or by email at SPPDpublichearing@epa.gov. If requested, the virtual hearing will be held on **[INSERT DATE 21 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The hearing will convene at 10:00 a.m. Eastern Time (ET) and will conclude at 4:00 p.m. ET. The EPA may close a session 15 minutes after the last pre-registered speaker has testified if there are no additional speakers. The EPA will announce further details at <https://www.epa.gov/stationary-sources-air-pollution/surface-coating-plastic-parts-business-machines-industrial-surface>.

If a public hearing is requested, the EPA will begin pre-registering speakers for the hearing no later than 1 business day after a request has been received. To register to speak at the virtual hearing, please use the online registration form available at <https://www.epa.gov/stationary-sources-air-pollution/surface-coating-plastic-parts-business-machines-industrial-surface> or contact the public hearing team at (888) 372-8699 or by email at SPPDpublichearing@epa.gov. The last day to pre-register to speak at the hearing will be **[INSERT DATE 12 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Prior to the hearing, the EPA will post a general agenda that will list pre-registered speakers in approximate order at: <https://www.epa.gov/stationary-sources-air-pollution/surface-coating-plastic-parts-business-machines-industrial-surface>.

The EPA will make every effort to follow the schedule as closely as possible on the day of the hearing; however, please plan for the hearings to run either ahead of schedule or behind schedule.

Each commenter will have 5 minutes to provide oral testimony. The EPA encourages commenters to provide the EPA with a copy of their oral testimony electronically (via email) by emailing it to sutton.lisa@epa.gov. The EPA also recommends submitting the text of your oral testimony as written comments to the rulemaking docket.

The EPA may ask clarifying questions during the oral presentations but will not respond to the presentations at that time. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral testimony and supporting information presented at the public hearing.

Please note that any updates made to any aspect of the hearing will be posted online at <https://www.epa.gov/stationary-sources-air-pollution/surface-coating-plastic-parts-business-machines-industrial-surface>. While the EPA expects the hearing to go forward as set forth in this document, please monitor our website or contact the public hearing team at (888) 372-8699 or by email at SPPDpublichearing@epa.gov to determine if there are any updates. The EPA does not intend to publish a document in the *Federal Register* announcing updates.

If you require the services of a translator or a special accommodation such as audio description, please pre-register for the hearing with the public hearing team and describe your needs by **[INSERT DATE 7 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA may not be able to arrange accommodations without advance notice.

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2021-0200. All documents in the docket are listed in <https://www.regulations.gov/>. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. With the exception of such material, publicly available docket materials are available either electronically in *Regulations.gov* or in hard copy at the EPA Docket Center, Room 3334, WJC West Building, 1301 Constitution Avenue NW, Washington, DC. The Public

Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the EPA Docket Center is (202) 566–1742.

Instructions. Direct your comments to Docket ID No. EPA-HQ-OAR-2021-0200. The EPA’s policy is that all comments received will be included in the public docket without change and may be made available online at <https://www.regulations.gov/>, including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit electronically to <https://www.regulations.gov/> any information that you consider to be CBI or other information whose disclosure is restricted by statute. This type of information should be submitted as discussed in the *Submitting CBI* section of this document.

The EPA may publish any comment received to its public docket. Multimedia submissions (audio, video, *etc.*) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

The <https://www.regulations.gov/> website allows you to submit your comment anonymously, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through <https://www.regulations.gov/>, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any

digital storage media you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should not include special characters or any form of encryption and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at <https://www.epa.gov/dockets>.

Submitting CBI. Do not submit information containing CBI to the EPA through <https://www.regulations.gov/>. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, note the docket ID, mark the outside of the digital storage media as CBI, and identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in the *Instructions* section of this document. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI and note the docket ID. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2.

Our preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol (FTP), or other online file sharing services (*e.g.*, Dropbox, OneDrive, Google Drive). Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings and note the docket ID. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link. If sending CBI information through the postal service, please send it to the following address: OAQPS

Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2021-0200. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

Preamble acronyms and abbreviations. Throughout this notice the use of “we,” “us,” or “our” is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

ACT	Alternative Control Techniques document
ADI	Applicability Determination Index database
ANSI	American National Standards Institute
ASTM	ASTM International
BACT	best achievable control technology
BID	background information document
BSER	best system of emission reduction
CAA	Clean Air Act
CBI	Confidential Business Information
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
CTG	Control Techniques Guidelines document
CDX	Central Data Exchange
ECHO	Enforcement and Compliance History Online database
EIS	Emissions Inventory System database
EJ	environmental justice
EMI/RFI	electromagnetic interference/radio frequency interference
EPA	Environmental Protection Agency
FR	<i>Federal Register</i>
GHG	greenhouse gas
HVLP	high-volume, low-pressure
ICR	information collection request
kg VOC/l	kilograms volatile organic carbon per liter
km	kilometer
lb VOC/gal	pounds volatile organic carbon per gallon
LAER	lowest achievable emission rate
Mg	megagram
Mg/yr	megagrams per year
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NEI	National Emissions Inventory
NESHAP	national emission standards for hazardous air pollutants
NSPS	new source performance standards
NTTAA	National Technology Transfer and Advancement Act
OAQPS	Office of Air Quality Planning and Standards
OMB	Office of Management and Budget

PDF	portable document format
PRA	Paperwork Reduction Act
RACT	reasonably available control technology
RBLC	RACT/BACT/LAER Clearinghouse
RFA	Regulatory Flexibility Act
RIN	Regulatory Information Number
RTO	regenerative thermal oxidizer
RTR	risk and technology review
scf	standard cubic feet
SIC	standard industrial classification
SSM	startup, shutdown, and malfunctions
TE	transfer efficiency
tpy	tons per year
UMRA	Unfunded Mandates Reform Act
U.S.C.	United States Code
UV/EB	ultraviolet/electron beam
VCS	voluntary consensus standard
VOC	volatile organic compound(s)

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- J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

I. General Information

A. Does this action apply to me?

The source category that is the subject of this proposal is surface coating of plastic parts for business machines regulated under CAA section 111, New Source Performance Standards. These surface coating operations may be (but are not necessarily) among establishments indexed under the 2022 North American Industry Classification System (NAICS) code 333310 – Commercial and Service Industry Machinery Manufacturing. This NAICS code merely provides a guide for readers regarding the entities that this proposed action is likely to affect. Three stationary sources that currently perform surface coating of plastic parts for business machines and are subject to the New Source Performance Standards (NSPS) subpart TTT will be affected by the portions of this proposal that amend NSPS subpart TTT. With respect to the proposed requirements to be added in NSPS new subpart TTTa, which is specific to affected facilities that are constructed, modified, or reconstructed after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, the EPA estimates that over the next 8 years following this proposal, no new, modified, or reconstructed facilities that perform surface coating of plastic parts for business machines will be affected by this proposal. Information supporting that estimate is provided in the memorandum *Best System of Emission Reduction (BSER) Review for Surface Coating of Plastic Parts for Business Machines (40 CFR Part 60, Subpart TTT)* (BSER

Review memorandum), available in the docket for this action. The proposed standards, once promulgated, will be directly applicable to the affected sources. Federal, state, local, and tribal government entities would not be affected by this proposed action.

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this action is available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this proposed action at <https://www.epa.gov/stationary-sources-air-pollution/surface-coating-plastic-parts-business-machines-industrial-surface>. Following publication in the *Federal Register*, the EPA will post the *Federal Register* version of the proposal and key technical documents at this same website.

A redline/strikeout version of the regulatory language showing the edits that would be necessary to incorporate the changes to NSPS subpart TTT and NSPS subpart TTTa proposed in this action is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2021-0200). Following signature by the Administrator, the EPA will also post a copy of this document at <https://www.epa.gov/stationary-sources-air-pollution/surface-coating-plastic-parts-business-machines-industrial-surface>.

II. Background

A. What is the statutory authority for this action?

The EPA's authority for this proposed rule is CAA section 111, which governs the establishment of standards of performance for stationary sources. Section 111(b)(1)(A) of the CAA requires the EPA Administrator to list categories of stationary sources that in the Administrator's judgment cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare. The EPA must then issue performance standards for new (and modified or reconstructed) sources in each source category pursuant to CAA section 111(b)(1)(B). These standards are referred to as new source performance standards, or NSPS. The EPA has the authority to define the scope of the source categories, determine the

pollutants for which standards should be developed, set the emission level of the standards, and distinguish among classes, type and sizes within categories in establishing the standards.

CAA section 111(b)(1)(B) requires the EPA to “at least every 8 years review and, if appropriate, revise” new source performance standards. However, the Administrator need not review any such standard if the “Administrator determines that such review is not appropriate in light of readily available information on the efficacy” of the standard. When conducting a review of an existing performance standard, the EPA has the discretion and authority to add emission limits for pollutants or emission sources not currently regulated for that source category.

In setting or revising a performance standard, CAA section 111(a)(1) provides that performance standards are to reflect “the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.” The term “standard of performance” in CAA section 111(a)(1) makes clear that the EPA is to determine both the best system of emission reduction (BSER) for the regulated sources in the source category and the degree of emission limitation achievable through application of the BSER. The EPA must then, under CAA section 111(b)(1)(B), promulgate standards of performance for new sources that reflect that level of stringency. CAA section 111(b)(5) precludes the EPA from prescribing a particular technological system that must be used to comply with a standard of performance. Rather, sources can select any measure or combination of measures that will achieve the standard. Pursuant to the definition of new source in CAA section 111(a)(2), standards of performance apply to facilities that begin construction, reconstruction, or modification after the date of publication of the proposed standards in the *Federal Register*. Under CAA section 111(a)(4), “modification” means any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously

emitted. Changes to an existing facility that do not result in an increase in emissions are not considered modifications. Under the provisions in 40 CFR 60.15, reconstruction means the replacement of components of an existing facility such that: (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility; and (2) it is technologically and economically feasible to meet the applicable standards. Pursuant to CAA section 111(b)(1)(B), the standards of performance or revisions thereof shall become effective upon promulgation.

B. What is the source category?

1. Background on the Source Category

The surface coating of plastic parts for business machines was listed as a source category for regulation under section 111 of the CAA in 1986, based on the Administrator's determination that emissions from facilities that surface coat plastic business machine parts cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. See 51 FR 869 (January 8, 1986). The NSPS for surface coating of plastic parts for business machines was proposed on January 8, 1986 (51 FR 854), and promulgated at 40 CFR part 60, subpart TTT, on January 29, 1988 (53 FR 2672) (1988 NSPS). Subpart TTT applies to affected facilities that commence construction, reconstruction, or modification after January 8, 1986.

The 1988 NSPS established VOC emission limits calculated for each type of coating used at each spray booth during each nominal 1-month period. Subsequent to promulgation of the NSPS, in 1988 the EPA issued a correction because of an inadvertent inclusion of delegable functions in the list of nondelegable functions in 40 CFR 60.726 (53 FR 19300, May 27, 1988). In 1989, the EPA issued a final rule (54 FR 25458, June 15, 1989) to clarify that electromagnetic interference and radio frequency interference (EMI/RFI) shielding coatings that are applied to the surface of plastic business machine parts to attenuate EMI/RFI signals were exempt from the regulation.

In general, plastic parts are coated to provide color, texture, and protection, improve appearance and durability, attenuate EMI/RFI signals, and conceal mold lines and flaws. Examples of plastic parts specific to the coatings industry sector for the surface coating of plastic parts for business machines include plastic housings for electronic office equipment, such as computers and copy machines, and for medical equipment.¹ Structural foam injection molding and straight injection molding are among predominant forming techniques used to manufacture plastic parts that are used in business machines. The surface coating of plastic parts for business machines may be performed within several industries, including business machine manufacturers, independent plastic molders and coaters, and “coating only” shops. Sources that perform surface coating of plastic parts for business machines include job shops that must accommodate a wide variety of coatings and wide range of part shapes.

In the 1986 NSPS proposal and the 1988 NSPS, the EPA identified the spray booth as the affected facility subject to subpart TTT. In the 1986 proposed NSPS, the EPA explained why the spray booth, a narrow and simple equipment grouping, was selected as the affected facility.² The term “spray booth” means the structure housing the spray application equipment and ancillary equipment associated with the enclosure. It includes not only the enclosure and ventilation system for spray coating but also the spray gun(s) and ancillary equipment such as pumps and hoses associated with the enclosure.³ The 1988 NSPS applies to these sources regardless of production capacity.

As used in the affected facility (spray booth), the types of coatings subject to VOC emission limits in the 1988 NSPS include prime coats, color coats, texture coats, and touch-up coats. The VOC emission sources covered in the 1988 NSPS are: (1) the spray booths; (2) the

¹ Alternative Control Techniques Document: Surface Coating of Automotive/Transportation and Business Machine Plastic Parts, EPA 453/R-94-017, February 1994, p. 2-1.

² Proposed rule, “*Standards of Performance for New Stationary Sources: Industrial Surface Coating; Plastic Parts for Business Machines*” (51 FR 854, January 8, 1986) (1986 proposed NSPS) at pp. 862–63.

³ 1986 proposed NSPS, 51 FR 854 at 855 and 862.

flash-off areas; and (3) the curing ovens.⁴ According to the regulation at 40 CFR 60.722(b), all VOC emissions that are caused by coatings applied in each affected facility, regardless of the actual point of discharge of emissions into the atmosphere, shall be included in determining compliance with the emission limits. Thus, as the EPA explained in the 1988 NSPS, VOC emissions from the flash-off area and oven are covered by the standards on the basis that the coatings application that takes place in the spray booth is the cause of VOC emissions from the flash-off area and oven.⁵

Typically, a plastic part is surface coated in a spray booth that houses either automatic or manual spray application equipment (one or more spray guns). After being coated, the part is moved, whether manually or by conveyor, to a flash-off area and then to a curing oven. The purpose of the flash-off area is to allow sufficient time for some portion of the solvents from a newly applied coating to evaporate, sometimes between coats, because the coating may not dry correctly unless it is given the recommended flash time. The flash-off area is usually very large and not enclosed, and indoor VOC concentrations resulting from flash-off are typically reduced by dilution ventilation for worker safety.⁶ Whether a batch oven or a conveyor oven, the curing oven applies enough heat to the newly coated part to create a chemical reaction that stabilizes the newly applied coating. For surface coating of plastic parts for business machines, coatings are typically cured at a relatively low temperature, near 60 degrees Celsius (140 degrees Fahrenheit).

Regardless of the type of coating in use at a facility that surface coats plastic parts for business machines, approximately 80 percent of total VOC emissions occur in the spray booth. Most of the solvent-laden air in these facilities comes from the spray booth and flash-off areas, and the concentration of VOC in that air is very low because it must be diluted to protect workers from breathing harmful levels of organic solvents. The Occupational Safety and Health

⁴ In this source category, approximately 80 percent of the emissions occur in the spray booths, 10 percent occur in the flash-off areas, and 10 percent occur in the ovens (1986 proposed NSPS, 51 FR 854 at 858/3).

⁵ 53 FR 2672 at 2674.

⁶ 1986 proposed NSPS, 51 FR 854 at 858/3.

Administration (OSHA) has specific requirements for the design and construction of spray booths (see 29 CFR 1910.107(b)) and requires a minimum velocity of air into all openings of a spray booth (see 29 CFR 1910.94(c)(6), table G-10). An induced air flow is maintained in a spray booth not only to keep solvent concentrations at a safe level but also to remove overspray in order to minimize contamination. The VOC from these areas can be captured and ducted to a control device, but the high volume of air and low concentration of VOC make this a costly method of control. For example, the cost of using a thermal incinerator with primary heat recovery to control VOC emissions from the spray booths and flash-off areas for a medium-sized model plant was estimated in the EPA's 1985 document titled *Surface Coating of Plastic Parts for Business Machines—Background Information for Proposed Standards*, EPA-450/3-85-019a, December 1985 (1985 BID), available in the docket for this action, to be \$11,000 to \$21,000 per megagram (Mg) (\$10,000 to \$19,000 per ton) of VOC controlled.⁷ The specific cost depends in part on the booth ventilation rate.

2. Coatings Used in the Source Category

Low-VOC-content coatings have been developed for surface coating operations generally; as demonstrated by sources' compliance with VOC emission limits in the EPA's Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings, EPA-453/R-08-003, September 2008 (2008 CTG) as well as state regulations, coatings manufacturers have been successful in reformulating coating products to meet more stringent limits.

The types of coatings currently in use for application to plastic business machine parts include conventional solvent-based coatings, higher-solids coatings, and waterborne coatings, all of which emit VOC to the atmosphere when organic solvents evaporate from the coatings during coating and curing processes. The properties of the different plastics determine the types of coatings that can be used on them. For instance, some plastics are damaged by the organic

⁷ 1985 BID, p. 4-14.

solvents in solvent-based or waterborne coatings. Also, adhesion characteristics can differ between plastics.

The constituents of a coating typically include a mixture of solvents and solids. If a coating needs to be made thinner before use, the owner or operator may add additional solvents to dilute the coating. The solvents portion of the coating (sometimes referred to as the volatiles portion) can include water and exempt solvents as well as regulated VOCs. The solids portion of the coating typically includes pigments, binders, and additives. The solids portion is what is intended to be applied to and remain on the product being coated. As a product is sprayed with coating, some of the solids will adhere to the product being coated. Even under optimal conditions, however, some of the solids will be excess spray that is discarded as waste. When calculated as a percentage of the total volume of a coating, the solids may be referred to as “volume solids.” When comparing a gallon of a coating with a higher volume solids (*e.g.*, 60 percent volume solids) and a gallon of coating with a lower volume solids (*e.g.*, 30 percent volume solids), one cannot simply conclude that the higher-solids coating will emit less VOC. To calculate the mass of VOC in that gallon of coating, one must know the makeup of the solvents portion and the coating’s VOC density (or solids density).

Although a coating’s solids content and regulated VOC content are not directly inversely proportional to each other, they are closely related. To evaluate coating reformulation options and to estimate total VOC emissions from coating operations, the EPA often relies on a material balance approach that is based on our determination that all of the coating’s VOC content will evaporate and will be emitted unless captured and routed to a control device.⁸

3. Spray Application Technology

The type of coating to be used is a factor in selecting the appropriate spray application technique (type of spray gun, choice of fluid nozzle size, amount of thinning). Higher-solids

⁸ EPA. AP-42, April 1981, section 4.2.2.1.2. Emissions from surface coating for an uncontrolled facility can be estimated by assuming that all VOC in the coatings is emitted.

coatings are especially suited to application by a conventional (air atomized) spray gun, which allows a lot of air pressure to atomize the coating. Coatings of lower viscosity may be sprayed with, *e.g.*, a high-volume, low-pressure (HVLP) spray gun, an airless air-assisted spray gun, or an electrostatic air spray gun, which waste less coating compared to a conventional spray gun.

The transfer efficiency (TE) is the ratio of the coating solids that adhere to a part to the total amount of coating solids used. More simply, the TE of the spray application method indicates the amount of coating solids that will land on the intended target. Thus, TE also indicates the amount of excess coating sprayed, which is referred to as overspray. Improving TE reduces total coating consumption and results in decreased VOC emissions. Thus, owners and operators of surface coating operations are economically motivated to maximize the efficiency of their spray application methods. Even so, owners and operators are constrained in the extent to which TE can be improved: the type of plastic being coated affects the choice of coating, which in turn affects the choice of and efficiency of the spray application technique.

4. Format of VOC Content Data and Emission Limits

Emission limits for coatings operations, such as those recommended in CTGs and adopted by many state and local agencies, are sometimes expressed in terms of pounds of VOC per gallon of coating less water. Those units are directly useful, however, only for cases where compliance is achieved with low-VOC-content coatings alone. When add-on controls or transfer efficiency improvements are used, compliance calculations must be done on an equivalent solids basis.⁹

Coatings regulations and information from coatings manufacturers, when providing VOC content in terms of mass of VOC per volume of coating material, typically provide VOC content information (whether in metric or English units) in one or more of the following three formats. In the first format, “as supplied,” VOC content of the material is characterized as it leaves the coatings manufacturer site. In the second format, “as applied,” VOC content of the coating is

⁹ EPA. *A Guideline for Surface Coating Calculations*, EPA-340/1-86-016, July 1986, p. 2.

characterized “at application” or “as used.” The coating has been mixed according to manufacturer’s instructions, which may include a maximum amount of thinning with non-exempt compound solvents. The third format, “VOC per unit of applied coating solids,” considers the transfer efficiency of the application method to account for overspray. The NSPS subpart TTT limits are in this third format. The format of the 1988 NSPS was selected over a format that was based on mass of VOC per unit volume of coating consumed, because the latter format would not give credit for improving TE.¹⁰

Additional details on the development of the 1988 NSPS for surface coating of plastic parts for business machines can be found in the 1985 BID.¹¹

C. How do the current standards regulate emissions?

1. Best System of Emission Reduction in the 1988 NSPS

In the 1986 proposed NSPS, the EPA evaluated regulatory options that considered EMI/RFI shielding and exterior coating processes together. To simplify examination of those regulatory alternatives for the proposal, the EPA chose to present the cost, environmental, and energy impacts and cost effectiveness of control options for EMI/RFI shielding and exterior coating separately. For EMI/RFI shielding, the EPA evaluated four control options in the 1986 proposed NSPS. Three of those control options concerned VOC emissions from coatings, and the fourth concerned a non-VOC-emitting process, zinc-arc spray. For each of the four EMI/RFI shielding options considered, the cost effectiveness compared to the baseline was judged to be unreasonable. As a result, the EPA did not regulate EMI/RFI shielding in the 1988 NSPS. None of the currently affected facilities subject to NSPS subpart TTT is engaged in application of EMI/RFI shielding on plastic parts for business machines. Accordingly, the EPA is not proposing to address EMI/RFI shielding options in NSPS subpart TTTa.

¹⁰ 51 FR 854 at 863.

¹¹ *Surface Coating of Plastic Parts for Business Machines—Background Information for Proposed Standards*, EPA-450/3-85-019a, December 1985, available in the docket for this action.

For exterior coatings, in the 1986 proposed NSPS, the EPA evaluated eight control options. All eight of those control options concerned VOC emissions from coatings. For fog coating, the 1988 NSPS selected the application of waterborne coatings applied at a TE of 25 percent as the BSER. For prime, color (except fog coating), texture, and touch-up coating, the EPA selected the application of organic-solvent-based coatings containing 60 percent solids—at 40 percent TE for prime and color coats and at 25 percent TE for texture and touch-up coats—as the BSER.

2. Emission Limits in the 1988 NSPS

The 1988 NSPS established emission limits that are based on the BSER (a combination of coating formulation and application technology). For prime and color coats, and for fog coating, affected facilities must limit VOC emissions to no more than 1.5 kilograms of VOC per liter (kg VOC/l), or 13 pounds of VOC per gallon (lb VOC/gal) of coating solids applied. For texture and touch-up coats, affected facilities subject to the 1988 NSPS must limit VOC emissions to no more than 2.3 kg VOC/l (19 lb VOC/gal) of coating solids applied.

Noteworthy is that the regulation at 40 CFR 60.721 defines “coating solids applied” to mean the coating solids that adhere to the surface of the plastic business machine part being coated. Thus, the TE of the spray application technology is taken into account in the setting of the VOC emission limits of the 1988 NSPS and in calculation of compliance with those emission limits. It may be helpful to think of the denominator in those emission limits in terms of coating solids *deposited*.

3. Demonstrating Compliance with the 1988 NSPS

To demonstrate compliance with the 1988 NSPS emission limits, the owner or operator of an affected facility is provided equations (in 40 CFR 60.723(b)(i)) that factor in both VOC content and TE. The equations calculate the mass of VOC used for each type of coating used, the total volume of coating solids consumed for each coating type, and the volume-weighted average

transfer efficiency, all used to calculate the volume-weighted average mass of VOC emitted per unit volume of coating solids applied.

For purposes of compliance calculations, the regulation at 40 CFR 60.723 specifies the default TE to be used, depending on the application technology employed. A TE of 0.25 is the default value when air atomized spray is the application method used, and a TE of 0.40 is the default value when either air-assisted airless spray or electrostatic air spray is the application method used.

Because TE is a factor in calculations for demonstrating compliance with the VOC emission limits in the 1988 NSPS, the owner or operator at a surface coating facility is afforded some flexibility as to which combination of coating formulation and application technique to use for a given plastic part. For example, compliance with a limit of 1.5 kg VOC/l (13 lb VOC/gal) coating solids applied (the limit for both prime and color coating) can be achieved with a higher-VOC-content coating and a more efficient spray application method or with a lower-VOC-content coating and a less efficient spray application method. (Remember that the regulation at 40 CFR 60.721 defines “coating solids applied” to mean the coating solids that adhere to the surface of the plastic business machine part being coated.)

The 1988 NSPS requires that the owner or operator of an affected facility conduct an initial performance test and thereafter a performance test each nominal 1-month period, for each affected facility. Each monthly period, the owner or operator will calculate the volume-weighted average mass of VOC in coatings emitted per unit volume of coating solids applied (*i.e.*, deposited), for each type of coating (prime, color, texture, and touch-up) used during that period. Each 1-month calculation is considered a performance test.¹² Following an initial report, the owner or operator will submit a statement of compliance on a semiannual basis or, if the affected facility is not in compliance with the application emission limits, will submit a report of noncompliance on a quarterly basis.

¹² 40 CFR 60.723(b)(i).

4. Options for Case-by-Case Approval in the 1988 NSPS

The 1988 NSPS provides that if an owner or operator can demonstrate to the satisfaction of the Administrator that TE values other than those specified in subpart TTT are appropriate, the Administrator will approve their use on a case-by-case basis. Similarly, the Administrator will on a case-by-case basis approve a TE value for an application method not listed in the regulation.

Finally, facilities are not required to use the formulas and compliance demonstrations based on coating content and TE. Consistent with CAA section 111(b)(5), the 1988 NSPS expressly allows that compliance with subpart TTT can be achieved through the use of add-on controls, if the owner or operator at an affected facility can demonstrate to the Administrator on a case-by-case basis that VOC emissions reductions through use of add-on controls are within the otherwise applicable limits.¹³ The EPA is proposing to include in the new subpart TTTa these same case-by-case compliance approaches.

D. Background on Sources Subject to Subpart TTT

The EPA is aware of three stationary sources, located among three states, that currently perform surface coating of plastic parts for business machines. Of those three sources, two are small entities. Based on our review, the EPA has determined that all three sources are currently subject to the 1988 NSPS at 40 CFR part 60, subpart TTT, because they have affected surface coating operations that were constructed, reconstructed, or modified after January 8, 1986. The number of affected facilities (spray booths subject to NSPS subpart TTT) per stationary source ranges from one to ten. We also determined that none of the three sources are currently subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Plastic Parts at 40 CFR part 63, subpart PPPP, since each is an area source and so not subject to major source requirements under CAA section 112. None of the currently affected facilities subject to NSPS subpart TTT is engaged in application of EMI/RFI shielding on plastic parts for business machines. Add-on controls are not used by any of the three sources that are actively engaged in

¹³ 40 CFR 60.723(b)(2)(iv).

the surface coating of plastic parts for business machines, and no new plants are expected to be built that rely on add-on control for VOC emissions.

The EPA has determined that all three sources currently subject to the 1988 NSPS at 40 CFR part 60, subpart TTT, use low-VOC-coatings in combination with efficiency in spray application technology to comply with the emission limitations. The EPA also found that, through use of low-VOC-content coatings in combination with efficiency in spray application technology, one of the three sources actively engaged in the surface coating of plastic parts for business machines is complying with air permit limits that are more stringent than the VOC emission limits of the 1988 NSPS.¹⁴ That source is subject to New York State regulations requiring that all sources applying surface coatings to plastic parts for business machines in New York must comply with these more stringent VOC emission limits.¹⁵ These New York emission limits are identical to the VOC emission limits recommended for surface coating of business machines in table 4 of the 2008 CTG.

E. What data collection activities were conducted to support this action?

A full discussion of the EPA's data collection activities for the NSPS review is found in the BSER Review memorandum, available in the docket for this action. This section of the preamble provides a summary of those activities.

For review of the NSPS at 40 CFR part 60, subpart TTT, and development of the proposed new NSPS subpart TTTa, the EPA collected information from a typical variety of data sources.

¹⁴ Records prepared by Xerox Corporation; required under 40 CFR 60.723(b)(2)(iii) and codified in the source's Air State Facility air permit issued December 10, 2019, by New York State Department of Environmental Conservation.

¹⁵ Official Compilation of Codes, Rules and Regulations of the State of New York – Surface Coating Processes; 6 CRR – NY 228-1.4. In table B6, under Business Machine Coatings, the VOC content limit for primers, topcoats, texture coats, and touchup and repair is 0.35 kg per liter of coating (minus water and excluded compounds) at application, and the VOC content limit for fog coats is 0.26 kg per liter of coating (minus water and excluded compounds) at application. As comparison, these values are between 61 and 93 percent of the NSPS subpart TTT values, depending on coating type (and assuming a 40 percent transfer efficiency in converting to the NSPS format).

To compile a list of sources subject to subpart TTT (facility list), we queried the Enforcement and Compliance History Online (ECHO) database, which provides integrated compliance and enforcement information for approximately 800,000 regulated sources nationwide. Using the feature in ECHO to search on NSPS subpart TTT, the EPA identified 17 sources as potentially subject to NSPS subpart TTT. Of the 17 sources, nine had permit documents indicating that they were subject to the NSPS at the time of review. Upon contacting these nine individual sources, we learned that only three of those sources currently perform surface coating of plastic parts for business machines.

The EPA recognizes that not all states submit data to ECHO for the smallest sources, and so we sought to supplement the information from ECHO by collecting information on reasonably available control technology (RACT), best available control technology (BACT), and lowest achievable emission rate (LAER) determinations in the EPA's RACT/BACT/LAER Clearinghouse.¹⁶ The EPA established the RACT/BACT/LAER Clearinghouse, or RBLC, to provide a central database of air pollution technology information—including past RACT, BACT, and LAER decisions contained in New Source Review (NSR) permits—to promote the sharing of information among permitting agencies and to aid in future case-by-case determinations. Data in the RBLC are not limited to sources subject to RACT, BACT, and LAER requirements. Noteworthy prevention and control technology decisions and information are included even if they are not related to past RACT, BACT, or LAER decisions. Our search of the RBLC resulted in one potential addition to the facility list, but we found that the source does not currently perform surface coating of plastic parts for business machines and so did not include it in the facility list.

The EPA also queried the EPA's Applicability Determination Index (ADI),¹⁷ which is a web-based database containing memoranda issued by EPA on applicability and compliance

¹⁶ See <https://www.epa.gov/catc/ractbactlaer-clearinghouse-rblc-basic-information>.

¹⁷ See <https://cfpub.epa.gov/adi/index.cfm>.

issues associated with NSPS, NESHAP, and chlorofluorocarbons (CFC). Recently issued determinations are added to the database on a quarterly basis. Our search of the ADI did not result in any additions to the facility list.

Further, the EPA queried the EPA's Emissions Inventory System (EIS) database, which includes emissions data and supporting information from the 2017 National Emissions Inventory (NEI). Our search of the EIS did not result in any additions to the facility list.

For assistance in development of the facility list, and to confirm information compiled, we consulted: the industry trade association, the American Coatings Association; a major industrial coatings manufacturer, The Sherwin-Williams Company; and numerous EPA Regional Office contacts. Our communications with these representatives did not result in any additions to the facility list.

F. What other relevant background information and data are available?

In addition to the data sources described in section II.E of this preamble, the EPA reviewed the following information sources for advances in technologies, changes in cost, and other factors to review the standards in the 1988 NSPS for surface coating of plastic parts for business machines. The additional information sources include:

- Operating permits for 18 sources.
- Compliance demonstration reports for two sources.
- Publicly available inspection reports for one source.
- Alternative Control Techniques Document: Surface Coating of Automotive/Transportation and Business Machine Plastic Parts, EPA-453/R-94-017, February 1994, available in the docket for this action.
- Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings, EPA-453/R-08-003, September 2008, available in the docket for this action.

- Background documents and industry supplied data for supporting regulatory actions promulgated subsequent to the 1988 NSPS, including the 2004 Plastic Parts NESHAP and the 2020 RTR amendments to the 2004 Plastic Parts NESHAP.

III. How does the EPA perform the NSPS review?

As noted in section II.A of this preamble, CAA section 111 requires the EPA, at least every 8 years to review and, if appropriate revise the standards of performance applicable to new, modified, and reconstructed sources. If the EPA revises the standards of performance, they must reflect the degree of emission limitation achievable through the application of the BSER taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements. CAA section 111(a)(1).

In reviewing an NSPS to determine whether it is “appropriate” to revise the standards of performance, the EPA evaluates the statutory factors, which may include consideration of the following information:

- Expected growth for the source category, including how many new facilities, reconstructions, and modifications may trigger NSPS in the future.
- Pollution control measures, including advances in control technologies, process operations, design or efficiency improvements, or other systems of emission reduction, that are “adequately demonstrated” in the regulated industry.
- Available information from the implementation and enforcement of current requirements indicating that emission limitations and percent reductions beyond those required by the current standards are achieved in practice.
- Costs (including capital and annual costs) associated with implementation of the available pollution control measures.
- The amount of emission reductions achievable through application of such pollution control measures.

- Any nonair quality health and environmental impact and energy requirements associated with those control measures.

In evaluating whether the cost of a particular system of emission reduction is reasonable, the EPA considers various costs associated with the particular air pollution control measure or a level of control, including capital costs and operating costs, and the emission reductions that the control measure or particular level of control can achieve. The Agency considers these costs in the context of the industry's overall capital expenditures and revenues. The Agency also considers cost-effectiveness analysis as a useful metric and a means of evaluating whether a given control achieves emission reduction at a reasonable cost. A cost-effectiveness analysis allows comparisons of relative costs and outcomes (effects) of two or more options. In general, cost-effectiveness is a measure of the outcomes produced by resources spent. In the context of air pollution control options, cost-effectiveness typically refers to the annualized cost of implementing an air pollution control option divided by the amount of pollutant reductions realized annually.

After the EPA evaluates the statutory factors, the EPA compares the various systems of emission reductions and determines which system is "best." The EPA then establishes a standard of performance that reflects the degree of emission limitation achievable through the implementation of the BSER. In doing this analysis, the EPA can determine whether subcategorization is appropriate based on classes, types, and sizes of sources, and may identify a different BSER and establish different performance standards for each subcategory. The result of the analysis and BSER determination leads to standards of performance that apply to facilities that begin construction, reconstruction, or modification after the date of publication of the proposed standards in the *Federal Register*. Because the new source performance standards reflect the best system of emission reduction under conditions of proper operation and maintenance, in doing its review, the EPA also evaluates and determines the proper testing,

monitoring, recordkeeping and reporting requirements needed to ensure compliance with the emission standards.

See sections II.E and II.F of this preamble for information on the specific data sources that were reviewed as part of this action.

IV. Analytical Results and Proposed Rule Summary and Rationale

A. What are the preliminary results and proposed decisions based on our NSPS review, and what is the rationale for those proposed decisions?

This action presents the EPA's review of the requirements of 40 CFR part 60, subpart TTT pursuant to CAA 111(b)(1)(B). As described in section III of this preamble, the statutory review of NSPS subpart TTT for surface coating of plastic parts for business machines focused on whether there are any emission reduction techniques that are used in practice that achieve greater emission reductions than those currently required by NSPS subpart TTT for surface coating operations and whether any of these developments in practices have become the "best system of emissions reduction."

In the 1988 NSPS, the EPA determined the BSER to be a combination of application technology and coating formulation. Control techniques commonly used to reduce VOC emissions from general surface coating processes include use of more efficient coating application techniques, low-VOC-content coatings, and add-on controls. In reviewing the NSPS for surface coating of plastic parts for business machines, the EPA considered each of these emission reduction techniques.

Subsequent to the promulgation of the 1988 NSPS, the EPA promulgated other regulatory actions pursuant to CAA sections 112 and 183(e) that also regulate or otherwise address emissions from the same surface coating operations covered by NSPS subpart TTT. These regulatory actions include: (i) the Alternative Control Techniques Document: Surface Coating of Automotive/Transportation and Business Machine Plastic Parts, EPA 453/R-94-017, February 1994 (1994 ACT); (ii) the National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products, promulgated at 40 CFR part 63 subpart PPPP on

April 19, 2004 (69 FR 20968) (Plastic Parts NESHAP); (iii) the Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings, EPA-453/R-08-003, September 2008 (2008 CTG); and (iv) the Plastic Parts NESHAP risk and technology review (RTR) promulgated on July 8, 2020 (85 FR 41100).

Although the NESHAP and CTG requirements for surface coating of plastic parts are different in some respects from the NSPS for surface coating of plastic parts for business machines, due to the differences in CAA authorities, pollutants, emission limits and format, they apply to overlapping operations and were therefore considered in our review.

Based on this review, we have preliminarily determined that there are emission reduction techniques used in practice that achieve greater emission reductions than those currently required by NSPS subpart TTT for surface coating operations. The results and proposed decisions based on the analyses performed pursuant to CAA section 111(b) are presented in more detail later in this preamble. Pursuant to this review we are proposing revised standards in a new NSPS subpart, TTTa, that would apply to facilities that begin construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

For sources that are subject to NSPS subpart TTT, we are proposing certain revisions to subpart TTT that would not change the applicability of NSPS subpart TTT or the emission limits for VOC in subpart TTT. The proposed revisions pertaining to electronic submission of reports would apply to all affected facilities that commence construction, modification, or reconstruction after January 8, 1986 (*i.e.*, all affected facilities under both subpart TTT and proposed subpart TTTa). With respect to affected facilities subject to subpart TTT, none of these amendments would significantly increase the cost of the rule or result in a change in VOC emissions.

B. What are the results of our review of powder coatings and UV/EB coatings formulation?

The 2008 CTG identified the substitution of higher-solvent coatings with coatings containing little or no solvents as one way to reduce VOC emissions.¹⁸ These coatings include powder coatings, waterborne coatings, higher-solids coatings, and ultraviolet-cured coatings (either powder or liquid). However, the 2008 CTG also concluded that many of the low-VOC coatings or coatings with no solvents would not meet the performance requirements of certain plastic coating applications and therefore are not viable options for all plastic parts coating operations.

Among low-VOC-content coatings that the EPA considered in this NSPS review are thermal (heat-cured) powder coatings and UV/EB (ultraviolet/electron beam)-cured powder coatings. Powder coatings are essentially 100 percent solids. Powder coatings emit little or no VOC, but they typically require curing temperatures that exceed the temperature limitations of the plastic parts. For that reason, the EPA is not proposing thermal powder coatings as the BSER for surface coating of plastic parts for business machines. With respect to powder coatings that can be cured with ultraviolet or infrared radiation instead of heat, the EPA recognized in the 1985 BID (p. 3-17) that coatings manufacturers are developing such powder coatings. The use of UV/EB-cured coatings was not in practice in the coatings industry when the 1988 NSPS was being developed. Due to development in technology, use of UV/EB-cured coatings is technically feasible in many coating operations. A source subject to NSPS subpart TTT or subpart TTTa may adopt UV/EB technology as part of its compliance strategy. However, in promulgating the Plastic Parts NESHAP in 2004, the EPA determined that incremental emission reduction of requiring UV/EB-cured coatings would be relatively small and that the additional cost was not warranted.¹⁹ Since 2004, there have been no improvements in UV/EB technology that would

¹⁸ EPA. Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings. EPA-453/R-08-003. September 2008.

¹⁹ EPA. National Emission Standards for Hazardous Air Pollutants (NESHAP): Surface Coating of Plastic Parts and Products—Summary of Public Comments and Responses on Proposed Rule. EPA-453/R-03-007. August 2003.

justify a change in this conclusion. Among sources that perform surface coating of plastic parts for business machines, the EPA did not identify any sources using UV/EB technology and based on the information from the Plastic Parts NESHAP analysis, emission reductions from UV/EB-cured coatings would be small and not cost effective. Accordingly, the EPA is not proposing use of either thermal powder coating or UV/EB options as the potential BSER for this NSPS review.

C. What are the results of our review of spray application technology?

As part of our NSPS review and BSER analysis, we evaluated whether there are changes in the transfer efficiency (via application technology) as well as in the formulation of coatings. The spray applicator types through which the BSER was determined in 1988 continue to be in use at sources that perform surface coating of plastic parts for business machines, which include job shops that must use the types of spray applicators that accommodate a wide variety of coatings and wide range of part shapes. For conventional and air-assisted airless spray application technology, trade literature shows that TE values of 0.25 and 0.40, respectively, continue to be representative of the spray technologies in use.²⁰ A provision of subpart TTT allows a source to request the Administrator's approval to use some value other than subpart TTT default TE values for compliance purposes. However, in analysis of data collected in our review, we learned of no cases where a source needed to use a TE value other than (*i.e.*, higher than) the subpart TTT default TE values in order to comply with subpart TTT. On this basis, the EPA is proposing to retain the menu of subpart TTT default TE values and their associated spray applicator types in new subpart TTTa. The EPA is proposing also to allow a subpart TTTa affected facility, for a given type of coating application equipment at a given coating operation, to use a different (higher) TE with the Administrator's case-by-case approval. The EPA solicits comment on the proposed use of current subpart TTT default TE values in subpart TTTa. As described in the BSER Review memorandum (available in the docket for this action), the use of higher-efficiency spray application technology, such as HVLP spray guns, has grown among

²⁰ BSER Review memorandum.

surface coating operations generally. We are also soliciting data, information, analysis, and other input with respect to the ability of new, modified, or reconstructed sources to perform some or all surface coating of plastic parts for business machines through use of HVLP spray technology and whether a default transfer efficiency as high as 0.65 would be appropriately used, without case-by-case approval by the Administrator, in calculations of compliance with VOC emission limits under NSPS subpart TTTa.

D. What regulatory options did we identify, and how did we evaluate them?

1. Options Identified

For this NSPS review, as a result of the information and findings described in this preamble, we evaluated two regulatory options that rely on coating formulation and are more stringent than the current NSPS. The first option we evaluated is a VOC emission limit representative of the 2008 CTG's level of control (option 1, or the CTG-based option). The second option we evaluated is a VOC emission limit representative of the 1994 ACT's "Level 2" level of control (option 2, or the ACT-based option).

As a third option, in our NSPS review we evaluated the use of an add-on control device—a regenerative thermal oxidizer (RTO)—to remove a portion of VOC emissions that enter the spray booth exhaust. The EPA recognizes that other add-on control devices, such as adsorbers, absorbers, and concentrators, might be just as effective as an RTO alone for control of VOC emissions from coating operations generally. However, our review here focused on the RTO because performance of other devices can be influenced by specific compounds while an RTO is not so selective in terms of VOC destruction.

As a starting point in identifying potential control options, the EPA found the use of a prime coating, or primer, to be common. For example, for prime coating, the 1988 NSPS established an emission limit of 1.5 kg VOC/l (13 lb VOC/gal) of coating solids applied. As described in section II.D of this preamble, one of the three active affected facilities, Xerox, is complying with a New York air permit emission limit of 0.35 kg VOC/l (2.9 lb VOC/gal) of

prime coating minus water and excluded compounds at application, and it is doing so entirely through use of currently available coating formulations. That New York limit is identical to the VOC emission limit that is recommended in the 2008 CTG as RACT for primer coatings used in surface coating of business machines.²¹ In the format of the 1988 NSPS, the EPA calculates the 2008 CTG's equivalent VOC emission limit to be 1.4 kg VOC/l (12 lb VOC/gal) coating solids applied. That is, for prime coating, the 2008 CTG level and one active source's air permit emission limit are more stringent than the 1988 NSPS limit (the baseline) by 0.1 kg VOC/l coating solids applied (deposited). For that reason, the EPA evaluated as regulatory option 1 (the CTG-based option) a tightening of VOC emission limits to the levels recommended in the 2008 CTG.

The EPA, in its 1994 ACT, presented a reformulation control level (Level 2, as later described in this preamble) at 0.28 kg VOC/l (2.3 lb VOC/gal) coating, less water and exempt solvents, as a control option (short of recommendation as RACT) for "primer" for coating of plastic parts for business machines. In the format of the 1988 NSPS, the EPA calculates the 1994 ACT's equivalent VOC emission limit to be 0.43 kg VOC/l (3.6 lb VOC/gal) coating solids applied. That is, for prime coating, the 1994 ACT level is more stringent than the 1988 NSPS limit (the baseline) by 1.1 kg VOC/l coating solids applied (deposited). For that reason, the EPA evaluated as regulatory option 2 (the ACT-based option) a tightening of VOC emission limits to the reformulation "Level 2" presented in the 1994 ACT. The EPA, in its 1994 ACT, developed three control levels to estimate potential VOC emissions reductions. Two of the ACT levels, Level 1 and Level 2, were based on reformulation (*i.e.*, use of waterborne or higher-solids coatings); the third ACT control level, Level 3, was based on thermal incineration. We did not use the 1994 ACT's "Level 1" level of control as the basis for the ACT-based option for the reason that it is not significantly different overall from the 1988 NSPS level of control. For the

²¹ VOC emission limit of 0.35 kg VOC/l (2.9 lb VOC/gal) of coating as applied, excluding water and exempt compounds. 2008 CTG, Table 4, p. 34.

1994 ACT's "Level 3" level of control, estimated cost effectiveness was unacceptably high, ranging from \$6,900 (large plant) to \$34,000 (small plant) per ton of VOC removed. Nevertheless, for the NSPS review, the EPA did evaluate an RTO (a type of thermal incineration) as regulatory option 3.

2. Model Plant

Based on information the EPA collected from current affected facilities, a trade association, and a coatings manufacturer, we expect no new, modified, or reconstructed sources to become subject to the new NSPS subpart TTTa over the next 8 years. Therefore, for purposes of our review, the EPA evaluated the identified regulatory options in terms of impacts on affected facilities--cost, environmental, and energy impacts, as well as cost effectiveness of control options--based on a representative model plant (which we call "model plant A"). Model plant A, with total plant VOC emissions of 27.2 megagrams per year (Mg/yr) (30.0 tons per year (tpy)), was developed using information from the three stationary sources currently subject to NSPS subpart TTT.

Additional detailed information on model plant A and how the EPA estimated emission reductions and cost effectiveness for the evaluated options is provided in the memorandum *Estimated Costs/Impacts 40 CFR 60 Subpart TTT* (Costs/Impacts memorandum), available in the docket for this action.

3. Representative Coating Approach and Baseline Emissions

Multiple coating applications are performed in the spray booth (color coating, prime coating, texture coating, and touch-up coating) and each coating type has its own VOC limit. To evaluate coating formulation options, the EPA adopted a "representative coating" approach. This approach allows standardization of coating variables across options so that the EPA could estimate comparable emission reductions between two coating formulation-based regulatory options evaluated in this NSPS review.

To grasp why the EPA employed a “representative coating” approach, consider first a calculation of the baseline VOC emission rate. Without employing some standardizing assumptions about our coating variables, four coating types (color coating, prime coating, texture coating, and touch-up coating) would contribute to that baseline (1988 NSPS level of control), each coating type with a corresponding coating limit (VOC content). To calculate a given option’s VOC emission reduction from the baseline, a straightforward calculation would be based on the same set of coating types, and with the same correspondence of coating limit to coating type. However, in this NSPS review, we have a different set of coating types contributing to emissions when we consider a VOC emission rate representative of a 2008 CTG-based level of control (option 1). Yet another set of coating types, with another correspondence of coating limits, contributes to emissions when we consider a VOC emission rate representative of a 1994 ACT-based level of control (option 2). Thus, without some standardization of assumptions, no direct comparison can be made between options.

In the 1986 NSPS proposal, the EPA based its proposed control options on the expectation that prime and color coats represent approximately one-half of the exterior coating solids applied.²² Toward an “apples to apples” comparison for our analysis, the EPA reconciled multiple emission limits within a given control option by calculating VOC emission reductions that are based on an average of the emission limits applicable to prime coating and color coating (or topcoat, as described in the 2008 CTG). For each regulatory option where this approach is used, the EPA applies the average of the prime coating and color coating emission limits as a “representative coating” limit for VOC.

As the baseline (the 1988 NSPS) level of control for evaluation of regulatory options, the EPA is using an emission limit of 1.5 kg VOC/l (13 lb VOC/gal) coating solids applied as the representative coating limit. In the 1988 NSPS, the VOC emission limit both for prime coating

²² 1986 proposed NSPS, 51 FR 854 at 860.

and for color coating is 1.5 kg VOC/l (13 lb VOC/gal) coating solids applied; the representative coating limit is the average of those limits.

4. Option 1, CTG-based Formulation

To evaluate the CTG-based option, the EPA is using an emission limit of 1.4 kg VOC/l (12 lb VOC/gal) coating solids applied as the representative coating limit; this limit is derived from the 2008 CTG. In the 2008 CTG, the VOC emission limit both for primer and for topcoat (which the EPA believes to be equivalent to color coat) is, upon conversion by calculation to the NSPS format, 1.4 kg VOC/l (12 lb VOC/gal) coating solids applied.

For option 1, based on the 2008 CTG recommended VOC emission limits, the estimated reduction in VOC emissions per facility (model plant A) would be 1.5 Mg/yr, (1.7 tpy) if option 1's representative coating comprised the entirety of the facility's 15,100 l/yr (4,000 gal/yr) of coating solids deposited. Option 1 (the CTG-based option) represents a level of VOC emission control demonstrated in practice by at least one of the three sources actively engaged in surface coating of plastic parts for business machines. In the Cost/Impacts memorandum (available in the docket for this action), table 4 shows VOC content of a representative list of compliant coatings currently available and identifies those we found to be currently in use at one or more sources. Because at least one source is already achieving the CTG-based option's level of control entirely through use of a variety of currently available coating formulations, the EPA assumes the cost effectiveness of option 1 (the CTG-based option) for the representative coating to be \$0 per ton of VOC reduction, as explained in section IV.D.7 of this preamble.

The 1988 NSPS treats fog coating operations as a special type of color coating²³ and at 40 CFR 60.721 defines "fog coat" (also known as mist coating and uniforming) to mean a thin coating applied to plastic parts that have molded-in color or texture or both to improve color uniformity. The EPA recognizes that even though the 1988 NSPS applies the same VOC

²³ See explanation in 1986 proposed NSPS (51 FR 854 at 862 and 864) as to why NSPS subpart TTT treats fog coating as a type of color coating.

emission limit for fog coating (1.5 kg VOC/l coating solids applied) as for other color coating, the 2008 CTG recommends a more stringent VOC emission limit for “fog coat,” at 0.95 kg VOC/l coating solids applied when the EPA calculates the limit in the format of the NSPS. The CTG’s recommended limit for fog coat is lower than that for its other coating types (primer, topcoat, texture coat, and touch-up and repair), which are at 1.4 kg VOC/l coating solids applied when the EPA calculates the limit in the format of the NSPS. The CTG based its recommended limit for fog coat on a Michigan regulation (see 2008 CTG at p. E-9). In considering the limitations of the data available for this review, we are proposing to follow in new subpart TTTa the same approach used for subpart TTT, which is to treat fog coating as a type of color coating and to apply the same level of VOC emission control to fog coating and other color coating. Notwithstanding the VOC emission limits proposed for new subpart TTTa, an affected facility that is subject to more stringent federally enforceable requirements, such as a state’s SIP-approved RACT limit for fog coating that is lower than proposed for the NSPS, would be required to comply with the applicable provisions of those rules. The EPA solicits comment on the proposed approach for fog coating.

The EPA also recognizes that we did not, in the 2008 CTG, recommend the CTG’s control approaches for sources that emit VOC below a certain emissions rate. (The CTG describes that cutoff to be sources where the total actual VOC emissions from all miscellaneous metal product and plastic parts surface coating operations, including related cleaning activities, at the source are below 6.8 kg/day (15 lb/day), or an equivalent level of 2.7 tons per 12-month rolling period, before consideration of controls.) For option 1 (the CTG-based option), which relies on a combination of coating formulation and application technique for compliance, we see no reason why the EPA should exempt the lowest-emitting sources from having to meet the same VOC emission limits in subpart TTTa that would apply to the higher-emitting ones. The EPA solicits comment on whether a minimum VOC emission rate cutoff for applicability of the NSPS would be necessary.

We found no significant nonair quality impacts or energy requirements associated with option 1 (the CTG-based option). We are soliciting data, information, analysis, and other input with respect to the energy and other impacts that are presented in the Costs/Impacts memorandum, available in the docket for this action.

5. Option 2, ACT-based Formulation

To evaluate the ACT-based option, the EPA is using an emission limit of 0.72 kg VOC/l (6.0 lb VOC/gal) coating solids applied as the representative coating limit; this limit is derived from the 1994 ACT. In the 1994 ACT, under earlier-described Level 2, the VOC emission limit for primer is, upon conversion by calculation to the NSPS format, 0.43 kg VOC/l (3.6 lb VOC/gal) coating solids applied, and the VOC emission limit for color coat is, upon conversion by calculation to the NSPS format, 1.0 kg VOC/l (8.4 lb VOC/gal) coating solids applied, for an average equal to 0.72 kg VOC/l (6.0 lb VOC/gal) coating solids applied.

For option 2, the estimated reduction in VOC emissions per facility (model plant A) would be 11.8 Mg/yr (13.0 tpy), if option 2's representative coating comprised the entirety of the facility's 15,100 l/yr (4,000 gal/yr) of coating solids deposited. Option 2 (the ACT-based option) represents a more stringent level of VOC emission control than the 1988 NSPS and what is demonstrated in practice by any of the three sources actively engaged in surface coating of plastic parts for business machines. The EPA reviewed compliance demonstration records collected from two active sources and coating manufacturers' Environmental Data Sheets for coatings that are marketed to operations that perform surface coating of plastic parts for business machines and that are representative of products in use for that purpose. The EPA then used the VOC content values (in the format of lb VOC/gal of coating, less water and exempt solvents) to calculate, in the format of the NSPS, a conservatively low VOC emission rate for each coating (13 unique coatings), assuming a TE of 0.40 (the higher of the NSPS default TE values). Comparing those calculated emission rates to the VOC emission limits at the option 2 (ACT-based) level of control, we found that all but four of the coatings would be able to achieve the

option 2 level of control without reformulation.²⁴ Only one of the 13 coatings could achieve the option 2 level of control without reformulation, if applied using a conventional air-atomized spray gun (for which the default TE is 0.25). For compliance with the option 2 level of control, the EPA has estimated an annualized cost of \$29,300 per reformulation and assumes that one facility (model plant A) would bear the cost of reformulation of one product among each of four coating types, totaling \$117,306 per year. On that basis, the EPA estimates the cost effectiveness of option 2 (the ACT-based option) for the representative coating to be \$9,024/ton VOC reduction. Thus, we propose to determine that this ACT-based option is not as cost effective as the CTG-based option. We found no significant nonair quality impacts or energy requirements associated with this option. We are soliciting data, information, analysis, and other input with respect to the energy and other impacts that are presented in the Costs/Impacts memorandum, available in the docket for this action.

6. Option 3, Regenerative Thermal Oxidizer

In addition to the BSER evaluation of transfer efficiency and coating formulation described in earlier sections of this preamble, in our NSPS review we evaluated whether there are add-on controls that could be considered the BSER for this source category. As an initial point, none of the three sources that currently perform surface coating of plastic parts for business machines use add-on controls to comply with NSPS subpart TTT. Nonetheless, we evaluated add-on controls because they are available, are adequately demonstrated in surface coatings operations more generally, and can in practice achieve emission reductions beyond those required by the current standards.

Under this option, the EPA estimates, the RTO would remove approximately 95 percent of the 80 percent of total VOC emissions that are estimated to enter the spray booth exhaust due to coating operations. The estimated reduction in VOC emissions per source (model plant A) would be 20.7 Mg/yr (22.8 tpy). The EPA used a publicly available tool to estimate cost

²⁴ EPA. *Costs/Impacts memorandum*.

effectiveness of the RTO option to be \$6,299/ton VOC reduction. The incremental cost effectiveness of this option compared to option 2 (the ACT-based option) was estimated to be \$2,725/ton of VOC reduced less than option 2. The cost-effectiveness analysis indicates that add-on controls, when compared to reformulation, can achieve a greater reduction at a lower cost. As described in the Costs/Impacts memorandum, available in the docket for this action, we estimated a \$917,808 total capital investment cost per source associated with the RTO option. However, we expect that a new source smaller than that represented by model plant A would achieve a smaller mass reduction in VOC, which would increase the cost effectiveness value beyond \$6,299/ton VOC reduction.

As required by CAA section 111, the EPA evaluated the nonair quality health and environmental impacts and energy requirements associated with the add-on control option. Indirect or secondary air emissions impacts are impacts that would result from the increased electricity usage and natural gas consumption associated with the operation of control devices to meet the proposed NSPS subpart TTTa. To evaluate this RTO option, these impacts were calculated on a per source basis and were based on model plant A. The energy impacts associated with the electricity and natural gas consumption associated with the operation of an RTO to control VOC emissions from the spray booth to meet proposed NSPS subpart TTTa include an estimated average electricity consumption of 93,700 kilowatt-hours per year per source and an estimated average natural gas consumption of 3,149 thousand standard cubic feet (mscf) per year per source compared to that of the current NSPS subpart TTT. For the RTO option, we estimated a greenhouse gas (GHG) impact (GHG emissions production) on a per source basis to be 167 Mg carbon dioxide equivalent. We are soliciting data, information, analysis, and other input with respect to the energy requirements and other impacts presented here. Additional detailed information is provided in the Costs/Impacts memorandum, available in the docket for this action.

Of the options evaluated, the RTO option provides for greater VOC emission reductions than the coating formulation options; however, there are secondary impacts associated with the RTO option (impacts that would result from the increased electricity usage and natural gas consumption associated with the operation of control devices). Regarding cost effectiveness, as described in the Costs/Impacts memorandum, available in the docket for this action, the estimated RTO cost effectiveness value of \$6,299/ton VOC reduction, was calculated using the annual emissions attributed to model plant A (27.2 Mg, or 30 tons). The annual emission rate for model plant A is closer to the potential emissions than to the actual emissions of the three sources that are currently subject to NSPS subpart TTT. In addition, we expect that a new source would be smaller than that represented by model plant A and have lower VOC concentration which will lead to higher \$/ton value than the one estimated for Option 3.

Even though no VOC concentration data are available for any of the three active sources, a new source—especially if smaller than that represented by model plant A—could produce a VOC concentration in the spray booth exhaust lower than the value used for model plant A i.e., 167 parts per million by volume (ppmv). As can be calculated using the EPA Air Pollution Control Cost Manual spreadsheet for incinerators and oxidizers (see Cost/Impacts memorandum for additional information), control of a lower VOC concentration through use of an RTO would require more auxiliary fuel and electricity than what was accounted for in our cost effectiveness value for the RTO option. On that basis, we can expect a cost effectiveness value beyond \$6,299/ton VOC reduction for new sources smaller than the model plant. Given the uncertainty of the cost effectiveness value, we are not recommending the RTO option as the BSER.

7. Summary of Regulatory Options and Proposed Determination of BSER

For the three regulatory options that the EPA identified and evaluated in this NSPS review (described earlier in this preamble), the EPA compared costs and emission reductions to the baseline of the requirements in the 1988 NSPS subpart TTT. The EPA calculated costs and emission reductions (and cost effectiveness) based on model plant A. See table 1, Baseline and

Regulatory Options Evaluated for New, Modified, or Reconstructed Sources after [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Table 1. Baseline and Regulatory Options Evaluated for New, Modified, or Reconstructed Sources after [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]

Option evaluated	Representative coating limit for VOC	Estimated per-facility VOC emission reduction	Cost effectiveness, \$/ton of VOC reduced
Baseline—Comply with VOC emission limits of 1988 NSPS	1.5 kg VOC/l (13 lb VOC/gal) coating solids applied	Not applicable	Not applicable
Option 1—Comply with VOC emission limits based on 2008 CTG	1.4 kg VOC/l (12 lb VOC/gal) coating solids applied	1.5 Mg/yr (1.7 tpy)	\$0 [Note 1]
Option 2—Comply with VOC emission limits based on 1994 ACT	0.72 kg VOC/l (6.0 lb VOC/gal) coating solids applied	11.8 Mg/yr (13.0 tpy)	\$9,024
Option 3—Employ add-on control (RTO) to reduce VOC emissions from spray booth	Not applicable.	20.7 Mg/yr (22.8 tpy)	\$6,299

Note 1: The EPA assumes this cost to be \$0/ton based on the lack of cost data available and on our understanding of the availability of other low-VOC-content coatings.

The EPA assumes the cost effectiveness of option 1 (the CTG-based option) to be \$0 per ton of VOC reduction, on expectation that new, modified, and reconstructed sources will be able to achieve that option's level of control entirely through use of currently available coating formulations at the same cost. We lack information sufficient to determine the incremental costs that sources may incur to make necessary substitutions of current coatings with lower-VOC-content coatings. However, we expect the costs to be minimal because we expect compliance can be achieved through substitution with reformulated coatings that are currently available. We recognize that there are aspects of coatings substitution for which we do not have cost comparison data. Multiple factors could affect both direct and indirect costs as well as coating performance; these include consideration of application method, durability, and color. We specifically solicit information on what factors may be relevant in evaluating the cost effectiveness of option 1 and any data available on these factors. Because the option 1 level of control, somewhat more stringent than that of the 1988 NSPS, is demonstrated in practice and is the most cost effective of all three regulatory options that the EPA evaluated, the EPA proposes to determine that option 1 represents the BSER and that the 2008 CTG's VOC emission limits

for primer, topcoat, texture coat, and touch-up and repair represent the degree of emission limitation achievable through application of the BSER.

We are soliciting data, information, analysis, and other input with respect to the emission reductions, and the cost effectiveness identified for each of the regulatory options presented later in this preamble.

E. What are the proposed requirements for emissions from sources subject to the proposed NSPS subpart TTTa?

Based on the NSPS review and proposed determination presented in section IV.D, the EPA is proposing revised VOC emission limits for application of coatings onto plastic parts for business machines at affected facilities that commence construction, reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The proposed VOC emission limits reflect the EPA's preliminary determination that a combination of coating formulation and efficiency in application technology represents the updated BSER for surface coating of plastic parts for business machines. The proposed standard for NSPS subpart TTTa based on this updated BSER would limit VOC emissions from prime coating, color coating, texture coating, and touch-up coating to 1.4 kg VOC/l (12 lb VOC/gal) coating solids applied. Just as in subpart TTT, new subpart TTTa would treat fog coating as a type of color coating.

F. What compliance dates are we proposing?

Pursuant to CAA section 111(b)(1)(B), the effective date of the final rule requirements in NSPS subparts TTT and TTTa will be the promulgation date. Affected sources that commence construction, or reconstruction, or modification after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** must comply with all requirements of the subpart TTTa, no later than the effective date of the final rule or upon startup, whichever is later.

Affected facilities for which construction, modification, or reconstruction began on or after January 8, 1986, but on or before **[INSERT DATE OF PUBLICATION IN THE**

FEDERAL REGISTER] would continue to comply with the applicable standards under the NSPS in 40 CFR part 60 subpart TTT.

G. What other actions are we proposing, and what is the rationale for those actions?

1. Testing Requirements

In performing an NSPS review, the EPA also evaluates and determines the proper testing, monitoring, recordkeeping, and reporting requirements needed to ensure compliance with the emission standards. The NSPS at 40 CFR 60 subpart TTT lists EPA Method 24 as the method for determination of VOC content of each coating as received. In the alternative, 40 CFR 60.725 allows use of “other methods...to determine the VOC content of each coating if approved by the Administrator before testing.” In performing this NSPS review, we looked at whether there are voluntary consensus standards (VCS) available and practical for use as alternatives to EPA Method 24 for industrial surface coating of plastic parts for business machines. The results of our VCS search are provided in the memorandum *Voluntary Consensus Standard Results for New Source Performance Standards Review for Industrial Surface Coating of Plastic Parts for Business Machines*, which is available in the docket for this action. The complete list of acceptable VCS is listed in section VIII.I. of this preamble, and the VCS that we propose to incorporate by reference (IBR) under 40 CFR 60.17 as potential alternatives to EPA Method 24 are listed in section VII of this preamble. These changes are proposed for use with NSPS subparts TTT and TTTa.

2. Electronic Submission of Reports

The EPA is proposing that owners or operators of facilities that perform surface coating of plastic parts for business machines subject to the NSPS at 40 CFR part 60, subpart TTT, submit electronic copies of required performance test reports, quarterly reports of noncompliance, and semiannual statements of compliance, through the EPA’s Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI). A description of the electronic data submission process is provided in the memorandum *Electronic*

Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules, available in the docket for this action. The proposed rule requires that the performance test reports, quarterly reports of noncompliance, and semiannual statements of compliance be submitted as a portable document format (PDF) upload in CEDRI. The same requirements are being proposed in subpart TTTa. The proposed requirements would apply to all affected facilities that commence construction, modification, or reconstruction after January 8, 1986 (*i.e.*, all affected facilities under both subpart TTT and proposed subpart TTTa).

Additionally, the EPA has identified two broad circumstances in which extensions to the electronic submission of reports may be provided. These circumstances are (1) outages of the EPA's CDX or CEDRI which preclude an owner or operator from accessing the system and submitting required reports and (2) *force majeure* events, which are defined as events that will be or have been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevent an owner or operator from complying with the requirement to submit a report electronically. Examples of *force majeure* events are acts of nature, acts of war or terrorism, or equipment failure or safety hazards beyond the control of the facility. The EPA is providing these potential extensions to protect owners or operators from noncompliance in cases where they cannot successfully submit a report by the reporting deadline for reasons outside of their control. In both circumstances, the decision to accept the claim of needing additional time to report is within the discretion of the Administrator, and reporting should occur as soon as possible.

The electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability and transparency, will further assist in the protection of public health and the environment, will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements and by facilitating the ability of delegated state, local,

tribal, and territorial air agencies and the EPA to assess and determine compliance, and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic submission of reports also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic submission of reports is consistent with the EPA's plan²⁵ to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy²⁶ developed in response to the White House's Digital Government Strategy.²⁷ For more information on the benefits of electronic submission of reports, see the memorandum *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, referenced earlier in this section.

3. Startup, Shutdown, and Malfunction (SSM)

In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the CAA's requirement that some section 112 standards apply continuously. Consistent with *Sierra Club v. EPA*, we are proposing standards in this rule that apply at all times. The NSPS general provisions in 40 CFR 60.8(c) currently exempt non-opacity emission standards during periods of

²⁵ EPA's Final Plan for Periodic Retrospective Reviews, August 2011. Available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2011-0156-0154>.

²⁶ E-Reporting Policy Statement for EPA Regulations, September 2013. Available at: <https://www.epa.gov/sites/default/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf>.

²⁷ Digital Government: Building a 21st Century Platform to Better Serve the American People, May 2012. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digital-government.html>.

SSM. We are proposing that new NSPS subpart TTTa include specific requirements at 40 CFR 60.723a(c) that override the general provisions with respect to SSM. This proposal would make all standards in subpart TTTa apply at all times. These proposed requirements would apply to all affected facilities that commence construction, modification, or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

The EPA has attempted to ensure that the general provisions we are proposing to override are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. We are specifically seeking comment on whether we have successfully done so.

In proposing the standards in this rule, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has not proposed alternate standards for those periods. The primary means of controlling VOC emissions from surface coating of plastic parts for business machines is use of low-VOC-content coatings. This means of control is unaffected by startup and shutdown events.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead, they are, by definition, sudden, infrequent, and not reasonably preventable failures of emissions control, process, or monitoring equipment. (40 CFR 60.2). The EPA interprets CAA section 111 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 111 standards. Nothing in CAA section 111 or in case law requires that the EPA consider malfunctions when determining what standards of performance reflect the degree of emission limitation achievable through "the application of the best system of emission reduction" that the EPA determines is adequately demonstrated. While the EPA accounts for variability in setting emissions standards, nothing in CAA section 111 requires the Agency to consider malfunctions as part of that analysis. The EPA is not required to treat a malfunction in the same manner as the type of variation in performance that occurs during routine operations of a source. A malfunction is a failure of the source to perform in a "normal or

usual manner” and no statutory language compels EPA to consider such events in setting CAA section 111 standards of performance. The EPA’s approach to malfunctions in the analogous circumstances (setting “achievable” standards under CAA section 112) has been upheld as reasonable by the D.C Circuit in *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (D.C. Cir. 2016).

4. Definition of Business Machine

The EPA proposes to keep the definition of “business machine” that appears in subpart TTT, 40 CFR 60.721, except to make certain revisions to the list of example products included within the definition. Specifically, the EPA is proposing to delete the listed Standard Industrial Classification (SIC) codes, which are no longer in use, and replace the current list of example products that accompanied those SIC codes with a revised list of examples, as follows: “such as products classified as: electronic computing devices; calculating and accounting machines; telephone equipment; office machines; and photocopy machines.” Among example products that the EPA proposes to delete from the definition are typewriters and telegraph equipment, in light of the fact that these machines are far less commonly used than when this definition was first promulgated in 1988. The EPA’s current view is that to provide examples is helpful to the general reader but we are also considering whether we could instead simply delete from the definition the “such as” list of example business machine products altogether, and we welcome comments on that.

The EPA considered revising the definition to substitute the outdated SIC codes with the latest NAICS codes. However, upon comparison, we found no crosswalk between those SIC codes and suggested NAICS codes that would be helpful toward updating the definition of “business machine.” The surface coating of plastic parts for business machines source category focuses on a process rather than on some clearly delineated industry making specific business machines. As was noted in the 1985 BID (pp. 9-1 to 9-2), it is difficult to analyze the surface coating of plastic parts for business machines as an industry unto itself. First, the surface coating

of plastic parts for business machines represents an intermediate step in the production of business machines. Second, these surface coating operations are not classified within the representative industries. Third, it appears that individual existing markets are so small and specialized that publicly available data on them do not exist.

The EPA wishes to make clear that by changing the list of example business machine products, the EPA would not be changing the scope of the applicability of the current NSPS. The proposed revisions are intended to keep the meaning and intent of the definition as originally promulgated while allowing the definition to reflect changes in the business machines that are commonly used subsequent to the promulgation of subpart TTT in 1988. The same clarifications are being proposed in subpart TTTa. None of these amendments would increase the cost of the rule or result in a change in VOC emissions.

The EPA solicits comment on the proposed revisions to the definition of “business machine,” in particular on the proposed revised list of example business machine products. The EPA also solicits suggestions for additional examples to include in the definition. For example, in the 1994 ACT, plastic housings for medical equipment are among example surface-coated plastic parts for business machines.”²⁸

V. Summary of Cost, Environmental, and Economic Impacts

A. What are the air quality impacts?

Based on the EPA’s expectation that there will be no new, modified, or reconstructed sources over the next 8 years, we estimate that there will be no reduction in VOC emissions from proposed NSPS subpart TTTa. If a new source were to be constructed, however, there would be a reduction in VOC emissions, because the subpart TTTa emission limits being proposed would be more stringent than the subpart TTT emission limits. There would be no emission control cost associated with that hypothetical emission reduction because compliance with the subpart TTTa emission limits can be achieved through use of low-VOC-content coatings that are commercially

²⁸ 1994 ACT, p. 2-1.

available. As described in section IV.D.3 of this preamble, as the baseline level of control for the BSER analysis, the EPA used an emission limit of 1.5 kg VOC/l (13 lb VOC/gal) coating solids applied as the representative coating limit. In the 1988 NSPS, the VOC emission limit both for prime coating and for color coating is 1.5 kg VOC/l (13 lb VOC/gal) coating solids applied. For two other coatings—texture coatings and touch-up coatings—the VOC emission limits in the 1988 NSPS are less stringent, at 2.3 kg VOC/l (19 lb VOC/gal) coating solids applied. Therefore, the potential reduction in VOC emissions to result from proposed NSPS subpart TTTa is even greater than was calculated using the representative coating limit for purposes of the BSER analysis in this NSPS review.

Because we do not anticipate that any source will operate a control device to meet proposed NSPS subpart TTTa, we anticipate no energy impacts (electricity, natural gas consumption, GHG emissions production) or air quality impacts from the proposed NSPS subpart TTTa.

B. What are the cost impacts?

Based on the EPA's expectation that there will be no new, modified, or reconstructed sources over the next 8 years, we estimate that there will be no capital or annual costs incurred to comply with the proposed NSPS subpart TTTa in the 8-year period after the rule is final.

We anticipate minimal cost impacts on sources subject to NSPS subpart TTT. The EPA estimates a total cost of \$828 (\$276 per source), for sources subject to subpart TTT to become familiar with the CDX and CEDRI systems used to comply with the requirement to submit reports electronically. The labor costs (2 hours per source) would occur only in the first year following promulgation of the amendments to NSPS subpart TTT.

C. What are the economic impacts?

The EPA conducted an economic impact analysis for this proposal, as detailed in the memorandum *Economic Impact Analysis for the Proposed New Source Performance Standards*

Review for Industrial Surface Coating of Plastic Parts for Business Machines, which is available in the docket for this action.

The economic impacts of this proposed rule are expected to be minimal. The only incremental costs are associated with the proposed electronic report submission requirements for three existing facilities affected by subpart TTT. The EPA estimates total costs for this proposed rule of \$828 in 2021 dollars, which will be incurred in the first year following promulgation of the rule. No other costs are expected in the 8 years following promulgation of this proposal other than these Year 1 costs. Since the estimated compliance costs are minimal, this proposed rule is not expected to result in market impacts, regardless of whether costs are passed on to consumers or absorbed by affected firms.

Two of the three facilities affected by this proposed rule are owned by small entities. However, neither small entity is expected to incur significant cost impacts based on a comparison of the Year 1 facility-level compliance costs to the annual sales revenues (*i.e.*, cost-to-sales ratios) of the two small parent companies. Thus, this proposed rule will not have a significant economic impact on a substantial number of small entities.

D. What are the benefits?

The proposed requirements in subpart TTT and new subpart TTTa to submit reports and test results electronically will improve monitoring, compliance, and implementation of the rule. Based on the EPA's expectation that there will be no new, modified, or reconstructed sources over the next 8 years, we estimate that there will be no reduction in VOC emissions from proposed NSPS subpart TTTa. If a new source were to be constructed, however, there would be a reduction in VOC emissions, because the subpart TTTa emission limits would be more stringent than the subpart TTT emission limits.

Reducing emissions of VOC is expected to help reduce ambient concentrations of ground level ozone and increase compliance with the National Ambient Air Quality Standards (NAAQS) for ozone. A quantitative analysis of the impacts on the NAAQS in the areas located near

hypothetical new sources that perform surface coating of plastic parts for business machines would be technically complicated, resource intensive, and infeasible to perform in the time available, and would not represent the impacts for new, modified, and reconstructed affected facilities because the locations of those sources are currently unknown. For these reasons, we did not perform a quantitative analysis. However, currently available health effects evidence supporting the December 23, 2020, final decision for the ozone NAAQS continues to support the conclusion that ozone can cause difficulty breathing and other respiratory system effects. For people with asthma, these effects can lead to emergency room visits and hospital admissions. Exposure over the long term may lead to the development of asthma. People most at risk from breathing air containing ozone include people with asthma, children, the elderly, and outdoor workers. For children, exposure to ozone increases their risk of asthma attacks while playing, exercising, or engaging in strenuous activities outdoors.

VI. Request for Comments

We solicit comments on all aspects of this proposed action. Comments on the proposed emission limits, cost effectiveness estimates, and other impacts in this proposed action should be accompanied by data to support the comment. We are specifically interested in receiving information related to developments in practices, processes, and control technologies that reduce VOC emissions from owners or operators of facilities that perform surface coating of plastic parts for business machines and any other interested persons with such information.

VII. Incorporation by Reference

The EPA proposes to amend the 40 CFR 60.17 to incorporate by reference the following VCS:

- ASTM D2369-20, “Standard Test Method for Volatile Content of Coatings” is a test method that allows for more accurate results for multi-component chemical resistant coatings and is proposed as an alternative to EPA Method 24.

- ASTM D2697-03 (Reapproved 2014), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings” is a test method that can be used to determine the volume of nonvolatile matter in clear and pigmented coatings and is proposed as an alternative to EPA Method 24.
- ASTM D6093-97 (Reapproved 2016) “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer” is a test method that can be used to determine the percent volume of nonvolatile matter in clear and pigmented coatings and is proposed as an alternative to EPA Method 24.

We also identified VCS ASTM D2111-10 (2015), “Standard Test Methods for Specific Gravity of Halogenated Organic Solvents and Their Admixtures” as an acceptable alternative to EPA Method 24. This ASTM standard can be used to determine the density for the specific coatings (halogenated organic solvents) cited using Method B (pycnometer) only (as in ASTM 1217). We are not proposing this VCS because facilities that perform surface coating of plastic parts for business machines do not use halogenated organic solvents, based on our knowledge of the industry.

The ASTM standards are available from ASTM, International (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959. See <https://www.astm.org>.

VIII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <http://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to OMB for review. Any changes made in response to OMB recommendations have been documented in the docket. The EPA prepared an economic impact analysis (EIA) of the potential costs and benefits associated with this action. This analysis is available in the docket.

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA. The Information Collection Request (ICR) document, under OMB Control Number 2060-0162, has been assigned EPA ICR number 1093.14. You can find a copy of the ICR in the docket for this action (Docket ID No. EPA-HQ-OAR-2021-0200), and it is briefly summarized here. The ICR is specific to information collection associated with the source category referred to as surface coating of plastic parts for business machines, through 40 CFR part 60, subpart TTT and subpart TTTa.

As part of the NSPS review, the EPA is proposing emission limit requirements for new, modified, and reconstructed sources in 40 CFR part 60, subpart TTTa. We are also proposing testing, recordkeeping, and reporting requirements associated with 40 CFR part 60, subpart TTTa, that include the requirement for electronic submittal of reports. Further, we are proposing changes to the reporting requirements associated with 40 CFR part 60, subpart TTT, by including the requirement for electronic submittal of reports. This information is being collected to assure compliance with 40 CFR part 60, subpart TTT and subpart TTTa.

Respondents/affected entities: The respondents to the recordkeeping and reporting requirements are owners or operators of facilities performing surface coating of plastic parts for business machines subject to 40 CFR part 60, subpart TTT and subpart TTTa.

Respondent's obligation to respond: Mandatory (40 CFR part 60, subpart TTT and subpart TTTa).

Estimated number of respondents: In the 3 years after the amendments are final, approximately 3 respondents per year will be subject to the NSPS at 40 CFR part 60, subpart TTT, and approximately 0 respondents per year will be subject to the NSPS as 40 CFR part 60, subpart TTTa.

Frequency of response: The frequency of responses varies depending on the burden item. Responses include onetime review of rule requirements, reports of performance tests, quarterly reports of noncompliance, and semiannual statements of compliance.

Total estimated burden: The annual recordkeeping and reporting burden for responding facilities to comply with all of the requirements in the NSPS subpart TTT and NSPS subpart TTTa over the 3 years after the rule is final is estimated to be 2 hours (per year). The average annual burden to the Agency over the 3 years after the rule is final is estimated to be 0 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: The average annual cost to facilities that perform surface coating of plastic parts for business machines is \$276 in labor costs in the first 3 years after the rule is final. The average annual capital and operation and maintenance cost is \$0. The total average annual Agency cost over the first 3 years after the amendments are final is estimated to be \$0.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to OIRA_submission@omb.eop.gov, Attention: Desk Officer for the EPA. Because OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA will respond to any ICR-related comments in the final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. Details of this analysis are presented in the memorandum *Economic Impact Analysis for the Proposed New Source Performance Standards Review for Industrial Surface Coating of Plastic Parts for Business Machines*, which is available in the docket for this action. The annualized costs associated with the requirements in this action for the affected small entities are described in section V.C. above.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. While this action creates an enforceable duty on the private sector, the cost does not exceed \$100 million or more.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. It will neither impose substantial direct compliance costs on Federally recognized Tribal governments, nor preempt Tribal law, and does not have substantial direct effects on the relationship between the Federal Government and Indian Tribes or on the distribution of power and responsibilities between the Federal Government and Indian Tribes, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). No tribal facilities are known to be engaged in the industry that would be affected by this action nor are there any adverse health or environmental effects from this action. However, the EPA conducted a proximity analysis for this source category and found that one affected facility is located within 50 miles of Tribal

lands. Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA will offer consultation with Tribal officials during the development of this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This action is not a “significant energy action” because it is not likely to have a significant adverse effect on the supply, distribution or use of energy. Further, sources will be able to achieve the level of control in proposed NSPS subpart TTTa entirely through use of a variety of currently available coating formulations, without operation of a control device to meet the proposed standards.

I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This rulemaking involves technical standards. Therefore, the EPA conducted searches through the Enhanced NSSN Database managed by the American National Standards Institute (ANSI) to determine if there are VCS that are relevant to this action. The Agency also contacted VCS organizations and accessed and searched their databases. Searches were conducted for EPA Method 24.

During the search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA’s reference method, the EPA considered it as a potential equivalent method. All potential standards were reviewed to determine the practicality of the VCS for this rule. This review requires significant method validation data which meets the requirements of the EPA Method 301 for accepting alternative methods or scientific, engineering and policy equivalence to procedures in the EPA reference

methods. The EPA may reconsider determinations of impracticality when additional information is available for particular VCS. As a result, the EPA identified the following as acceptable VCS:

- ASTM D2369-20, “Standard Test Method for Volatile Content of Coatings” as an alternative to EPA Method 24.
- ASTM Method D2697-03 (Reapproved 2014), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings” as an alternative to EPA Method 24.
- ASTM Method D6093-97 (Reapproved 2016) “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer” as an alternative to EPA Method 24.
- ASTM D2111-10 (2015), “Standard Test Methods for Specific Gravity of Halogenated Organic Solvents and Their Admixtures” as an acceptable alternative to EPA Method 24. This ASTM standard can be used to determine the density for the specific coatings (halogenated organic solvents) cited using Method B (pycnometer) only (as in ASTM 1217).

The ASTM standards (methods) are available for purchase individually through the American National Standards Institute (ANSI) Webstore, <https://webstore.ansi.org>. Telephone (212) 642-4980 for customer service.

Additional information for the VCS search and determinations can be found in the memorandum *Voluntary Consensus Standard Results for New Source Performance Standards Review for Industrial Surface Coating of Plastic Parts for Business Machines*, which is available in the docket for this action.

Under 40 CFR 60.8(b) and 60.13(i) of subpart A of the General Provisions, a source may apply to the EPA to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications or procedures in the final rule or any amendments. The EPA welcomes comments on this aspect of the proposed rulemaking and,

specifically, invites the public to identify potentially applicable VCS and to explain why such standards should be used in this regulation.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

This action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

We performed a demographic analysis for the surface coating of plastic parts for business machines source category, which is an assessment of the proximity of individual demographic groups living close to the facilities (within 50 km and within 5 km). Results of the demographic analysis indicate representation within 5 km of existing facilities of one group above the national average: People without a High School Diploma.

Following the directives set forth in multiple Executive Orders, the Agency has carefully analyzed the impacts of this action on communities with EJ concerns. For Surface Coating of Plastic Parts for Business Machines facilities, the proximity demographic analysis of the three existing sources subject to NSPS subpart TTT shows that key demographic indicators for the populations around these facilities (such as the proportion of residents who are low-income or people of color) are similar to or lower than the national average. Based on the EPA's determination that there will be no new, modified, or reconstructed sources over the next 8 years, we estimate that there will be no reduction in VOC emissions from proposed NSPS subpart TTTa and no EJ impacts. If a new source were to be constructed at a future date, the new emission limits proposed for NSPS subpart TTTa reflect the BSER demonstrated and establish a new more stringent standard of performance for the primary sources of VOC emissions from the source category. Thus, if a source were to be constructed, modified, or reconstructed, the EPA expects the proposed requirements in subpart TTT will result in VOC emission reductions for communities surrounding the affected subpart TTTa sources compared to the existing rule in

subpart TTT and will result in lower VOC emissions for communities located in areas designated as ozone non-attainment areas. These areas are already overburdened by pollution.

Executive Order 12898 directs the EPA to identify the populations of concern who are most likely to experience unequal burdens from environmental harms; specifically, minority populations (*i.e.*, people of color), low-income populations, and indigenous peoples (59 FR 7629, February 16, 1994). Additionally, Executive Order 13985 is intended to advance racial equity and support underserved communities through federal government actions (86 FR 7009, January 20, 2021). The EPA defines EJ as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”²⁹ The EPA further defines fair treatment to mean that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.” In recognizing that minority and low-income populations often bear an unequal burden of environmental harms and risks, the EPA continues to consider ways of protecting them from adverse public health and environmental effects of air pollution.

This action proposes standards of performance for new, modified, and reconstructed sources that commence construction after the rule is proposed. Therefore, the future locations of the new sources at Surface Coating of Plastic Parts for Business Machines facilities are not known. In addition, it is not known which of the existing Surface Coating of Plastic Parts for Business Machines facilities will modify or reconstruct in the future. Therefore, the proximity demographic analysis was conducted for the three existing facilities to characterize the demographics in areas where the facilities are currently located.

To examine the potential for any EJ issues that might be associated with Surface Coating of Plastic Parts for Business Machines facilities, a demographic analysis assessed the individual

²⁹ See <https://www.epa.gov/environmentaljustice>.

demographic groups of the populations living within 5 kilometers (km) and 50 km of the three existing facilities. The EPA then compared the data from this analysis to the national average for each of the demographic groups.

The results of the demographic analysis (see Table 2) indicate that, for populations within 5 km of existing Surface Coating of Plastic Parts for Business Machines facilities, the percent of the population that are people of color (calculated as the total population minus the white population) is significantly lower than the national average (23 percent versus 40 percent). All demographic subgroups within people of color are also below the corresponding national averages. The percent of people living below the poverty level (10 percent) is below the national average (13 percent). The percent of the population that is over 25 without a high school diploma (13 percent) and those living in linguistic isolation (5 percent) were similar to the corresponding national averages (12 percent and 5 percent, respectively).

The results of the analysis of populations within 50 km of the three existing Surface Coating of Plastic Parts for Business Machines facilities are shown in Table 2. The percent of the population that are people of color (calculated as the total population minus the white population) is significantly lower than the national average (29 percent versus 40 percent). However, the percent of the population that is African American (17 percent) is higher than the national average (12 percent). All other demographic subgroups within people of color are below the corresponding national averages. The percent of people living below the poverty level (14 percent) is slightly above the national average (13 percent). The percent of the population that is over 25 without a high school diploma (10 percent) and those living in linguistic isolation (2 percent) were below the corresponding national averages (12 percent and 5 percent, respectively).

A summary of the proximity demographic assessment performed for the three existing Surface Coating of Plastic Parts for Business Machines facilities is included as Table 2. The methodology and the results of the demographic analysis are presented in a technical report,

Analysis of Demographic Factors for Populations Living Near Surface Coating of Plastic Parts for Business Machines, available in this docket for this action (Docket EPA-HQ-OAR-2021-0200).

Table 2. Proximity Demographic Assessment Results for Surface Coating of Plastic Parts for Business Machines NSPS Source Category Operations*

Demographic Group	Nationwide	Population within 50 km of 3 Existing Facilities	Population within 5 km of 3 Existing Facilities
Total Population	328,016,242	2,979,558	79,323
White and People of Color by Percent			
White	60%	71%	77%
People of Color	40%	29%	23%
People of Color by Percent			
African American	12%	17%	2%
Native American	0.7%	0.4%	0.2%
Hispanic or Latino (includes white and nonwhite)	19%	6%	14%
Other and Multiracial	8%	5%	7%
Income by Percent			
Below Poverty Level	13%	14%	10%
Above Poverty Level	87%	86%	90%
Education by Percent			
Over 25 and without a High School Diploma	12%	10%	13%
Over 25 and with a High School Diploma	88%	90%	87%
Linguistically Isolated by Percent			
Linguistically Isolated	5%	2%	5%

Notes:

- The nationwide population count and all demographic percentages are based on the Census' 2015-2019 American Community Survey five-year block group averages and include Puerto Rico. Demographic percentages based on different averages may differ. The total population counts within 5 km and 50 km of all facilities are based on the 2010 Decennial Census block populations.
- People of Color population is the total population minus the white population.
- To avoid double counting, the "Hispanic or Latino" category is treated as a distinct demographic category for these analyses. A person is identified as one of five racial/ethnic categories above: White, African American, Native American, Other and Multiracial, or Hispanic/Latino. A person who identifies as Hispanic or Latino is counted as Hispanic/Latino for this analysis, regardless of what race this person may have also identified as in the Census.

*This action proposes standards of performance for new, modified, and reconstructed sources that commence construction after the rule is proposed. Therefore, the locations of the construction of new Surface Coating of Plastic Parts for Business Machines facilities are not known. In addition, it is not known which of the existing

Surface Coating of Plastic Parts for Business Machines facilities will be modified or reconstructed in the future. Therefore, the demographic analysis was conducted for the 3 existing facilities as a characterization of the demographics in areas where these facilities are now located.

Michael S. Regan,

Administrator.

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